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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,477	03/26/2004	Takashi Ikeda	70591-017	8333

7590 06/02/2006  
McDERMOTT, WILL & EMERY  
600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER
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SEVER, ANDREW T

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/809,477	<b>Applicant(s)</b> IKEDA ET AL.	
	<b>Examiner</b> Andrew T. Sever	<b>Art Unit</b> 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 is/are rejected.
- 7) ☒ Claim(s) See Continuation Sheet is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)              |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/2006</u> . | 6) <input type="checkbox"/> Other: _____.  |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 1,3,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41, and 43/(3,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39, and 41).

Continuation of Disposition of Claims: Claims objected to are 4,5,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42, and 43/(4,5,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40, and 42).

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 1, 3, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43/(3, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, and 41) are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8/18/2005.

2. This application contains claims 1, 3, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43/(3, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, and 41 drawn to an invention nonelected with traverse in the reply filed on 8/18/2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Itoh (US 6,042,234 as cited in the previous office action.)

Itoh teaches in figure 1 a color separating and mixing element comprising, in its transparent cube (201), a first optical function surface (212) and a second optical function surface (211) which are unparallel to each other (see figure 2 which shows their disposition relative to each other), first and second faces of the cube being respectively taken as light incidence surfaces (sides facing light source L2 and L1 respectively), third, fourth and fifth faces of the cube being respectively taken as light incidence/output surfaces (sides facing mirrors 303, 301, and 302 respectively) and a sixth face of the cube being taken as a light output surface (side facing 401),

One light in the primary color which is predetermined polarized light incident on the first face of said cube passing through the first optical function surface and being emitted from the third face of the cube, said one light in the primary color returned after the direction of polarization thereof is rotated by 90 degrees being received in the third face of the cube, and the one light in the primary color being reflected by the first optical function surface and being emitted from said light output surface, (see the below

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descriptions which are with regards to the second face, which as shown in figure 3 meet applicant's claim limitations, the first face would behave in a similar fashion and meet applicant's claim language)

One (one of the lights from L1 as shown in figure 3), which is predetermined polarized light (S polarized light), of the two lights in the primary colors incident on the second face (221) of said cube passing through the second optical function surface (211) and being emitted from the fourth face of the cube (231), said one light in the primary color returned after the direction of polarization thereof is rotated by 90 degrees (1/4 wave plate (351) and mirror (301) work together to rotate the light by 90 degrees and reflect it back to fourth face of the cube) being received in the fourth face of the cube, the one light in the primary color being reflected by the second optical function surface (211) and being emitted from said light output surface (234), and

The other one (P polarized light shown in figure 3), which is predetermined polarized light, of the two lights in the primary colors incident on the second face of said cube (221) being reflected by the second optical function surface (211) and being emitted from the fifth face of the cube (232), said other one light in the primary color returned after the direction of polarization thereof is rotated by 90 degrees (mirror 302 and 1/4 wave plate (352) work together to rotate the light by 90 degrees and reflect it back to the fifth face of the cube) being received in the fifth face of the cube, and the other one light in the primary colors passing through the second optical function surface (211) and being emitted from said light output surface.

***Allowable Subject Matter***

5. Claims 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, and 43/(4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, and 42) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed 2/21/2006 have been fully considered but they are not persuasive.

Applicant argues that claim 2 requires that the light separating and synthesizing optical element must have both polarization dependency and wavelength selectivity. This is incorrect; applicant's claim 2 only requires that at least three lights are incident on the cube, one of which is incident on the first face, and two that are incident on the second face. There is no requirement that their color be different or that their polarization be different. The claim only requires that they behave in a specific way after reflecting off of first through third optical function surfaces. As outlined above they reflect in the claimed manner. Accordingly applicant's arguments are not found persuasive and the rejection has been repeated and made final.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

WO 2004/068197 to Okuhara (provided by the applicant, translated by the McElroy Translation company on May 2006)), Also meets the claim language (first light being LB and second and third being LR and LG) Third through fifth surfaces are 171, 172, and 173) of applicant's claim 2 and appears to specifically read on at least one of applicant's non-elected species.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "W B Perkey".

AS

**William Perkey**  
**Primary Examiner**